

## Students' perception of factors affecting learning

Factors affecting learning

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### Abstract

**Aim:** In this study, we aimed to evaluate the perception of medical students of external factors, which influence their learning process.

**Material and Methods:** The study was conducted in the Central Park Medical College Lahore in August - September 2021. The questionnaire was distributed to the medical students who wished to participate in this study. Two hundred and one completely filled proformas have been received, which were analyzed using computer software.

**Results:** The analysis of the two hundred and one completely filled proformas revealed that factors, which strongly influence the learning process include teaching by teachers with excellent teaching strategies/skills, having a separate room for study, 24/7 library availability, and revision of important component/topics in special revision sessions at the end of the course.

**Discussion:** The evaluation of the factors that influenced the learning process of the students from the students' point of view is vital for teachers and administrators of the institution because improvements made in this regard will enhance the performance and academic achievements of the students. The most important factors that have an impact on the learning process of the students are teaching strategies and a comfortable environment.

### Keywords

External Factors, Learning, Medical Students

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Introduction

Teaching and learning are the key steps in the progress and development of the human race. The development of effective plans and application of appropriate strategies for the process of learning are of vital importance. There are many factors, which may yield an impact on the learning process. The important influencing factors include internal motivation of the learners such as willingness to learn, mental and physical capabilities. However, external factors also contribute a lot to the learning process, which may include teaching strategies, infrastructure and an encouraging atmosphere. The academic achievement of the students is influenced by the educational infrastructure facilities [1]. The type of institution (public/private) and income of the parents also affect the academic performance of the students [2]. The culture also has an impact on learning [3]. Teaching strategies revealed influence on the students’ academic achievements [4]. Another important factor, which affects the learning process is the use of information technology [5]. Parental education is also an external factor influencing the children’s learning [6]. The aim of the present study is to assess the opinion of the medical students regarding the external factors, which influence their learning process.

Material and Methods

A questionnaire has been designed that included questions regarding the factors, which influence the learning process of students. This questionnaire contained twenty questions. After receiving ethical approval from the institutional ethics review board, the questionnaire was distributed among the medical students who consented to participate in this research. Medical students from the Central Park Medical College in Lahore participated in this study. This study was carried out in August and September 2021. This questionnaire lacks any personal identification like participants’ name, cell phone number and

email address. Completely filled proformas were analyzed using a computer software.

Statistical analysis:

Completely filled questionnaires were considered for data analysis. Microsoft excel was used to get the average of responses of students to each parameter and total score.

Results

In the present study, 201 completely filled proformas were received from the willing participants. The analysis of the data revealed that according to the students’ point of view regarding the factors, which strongly influence their learning process include teaching by teachers with excellent teaching strategies/skills (average score: 4.7), having a separate room for study (average score: 4.7), 24/7 library availability (average score: 4.6), a well as revision of important component/topics in the special revision sessions at the end of the course (average score: 4.6). The results are shown in Table 1. Other factors, which may affect the learning process of students in the opinion of students, include conduction of lectures containing difficult conceptual contents in the beginning of the day (average score: 3.9), conduction of practical sessions after the delivery of lectures of the respective topic (average score: 4.3), presentation of students in the small groups of 10-20 students (average score: 3.5), highlighting important things (in bold with different colors) in the slides of lectures (average score: 4.3), lecture theaters/laboratories with appropriate temperature such as air conditioning and heating (average score: 4.5), teaching by high qualified teachers (average score: 4.4), types of seats of the lectures theater wooden benches/plastics /soft sofa (average score: 4.1), conduction of tests on the first working day of every week (average score: 3.5), conduction of tests in alternative weeks (average score: 3.9), posttest/exam discussion in class (average score: 4.5), having a shared room for study (average score: 2).

Table 1. The factors which affect the learning process

Question	Gender	Score	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Total		Total score
			N	%	N	%	N	%	n	%	n	%	n	%	
Having own laptop	F	4.1	1	0.87	5	4.35	15	13.4	49	42.61	45	39.13	115	100	4.3 <sup>e</sup>
	M	4.2	2	2.33	3	3.49	11	12.79	28	32.56	42	48.84	86	100	
Having a separate room for study	F	4.6	1	0.87	4	3.48	2	1.74	30	26.9	78	67.83	115	100	4.7 <sup>e</sup>
	M	4.5	2	2.33	1	1.16	4	4.65	26	30.23	53	61.63	86	100	
Living in your house	F	3.8	5	4.35	8	6.96	30	26.9	34	29.57	38	33.04	115	100	3.7 <sup>d</sup>
	M	3.7	3	3.49	8	9.30	23	26.74	32	37.21	20	23.26	86	100	
Living in a hostel	F	3.2	11	9.57	18	15.65	40	34.78	33	28.70	13	11.30	115	100	3.2 <sup>c</sup>
	M	3.4	5	5.81	16	18.60	20	23.26	27	31.40	18	20.93	86	100	
Uninterrupted power supply (electricity) round the clock (24/7)	F	4.6	0	0.00	3	2.61	6	5.22	30	26.9	76	66.09	115	100	4.5 <sup>e</sup>
	M	4.4	1	1.16	0	0.00	11	12.79	27	31.40	47	54.65	86	100	
Availability of Canteen (for food/tea/coffee) round the clock (24/7)	F	4.5	0	0.00	1	0.87	4	3.48	41	35.65	69	60.00	115	100	4.3 <sup>e</sup>
	M	4.3	0	0.00	2	2.33	8	9.30	38	44.19	38	44.19	86	100	
Availability of Library facility round the clock (24/7)	F	4.4	3	2.61	0	0.00	11	9.57	33	28.70	69	60.00	116	101	4.6 <sup>e</sup>
	M	4.5	0	0.00	1	1.16	3	3.49	32	37.21	50	58.14	86	100	
Teaching by teachers with excellent teaching strategies /skills	F	4.8	0	0.00	0	0.00	1	0.87	22	19.13	92	80.00	115	100	4.7 <sup>e</sup>
	M	4.7	1	1.16	0	0.00	0	0.00	18	20.93	67	77.91	86	100	
Revision of important component / Topics in the special revision sessions at the end of the course	F	4.6	0	0.00	1	0.87	2	1.74	38	33.04	74	64.35	115	100	4.6 <sup>e</sup>
	M	4.6	0	0.00	2	2.33	0	0.00	27	31.40	57	66.28	86	100	

<sup>a</sup>means strongly disagree, <sup>b</sup> means disagree, <sup>c</sup> means Neutral, <sup>d</sup> means Agree, <sup>e</sup>strongly agree.

## Discussion

The data analysis in the present study revealed that according to the perception of the students, the strongest factor, which influences students' learning process is the excellent teaching strategies used by teachers. A study published by Urrutia-Aguilar ME et al showed that the teaching strategies have an impact on the learners' academic achievements [7]. Good teaching exerts a strong influence on learners [8].

In our study, the second most important factor that affects the learning of medical students is the availability of separate rooms for the study as per students' point of view. A peaceful and comfortable environment without distracting factors plays an important role in the learning process. Even the classroom environment such as temperature and ventilation influenced the students' examination scores [9].

The current study revealed that the third most influencing factor in the learning process is the availability of library facility round- the- clock (24/7) and revision of important components/ topics in the special revision sessions at the end of the course. The library use is closely related to academic achievement [10]. More use of the library in the college of medicine is quite important for the growth and development of the learners.

In our study, the majority of the students favors 24/7 library availability. The students also expressed their strong opinion regarding the revision of the important topics at the end of the course, which may reinforce the learning. According to the students' perception, other factors, which may affect the learning process include round- the- clock uninterrupted power supply (electricity), posttest/exam discussion in class and lecture theaters/laboratories with an appropriate temperature (air conditioning and heating). The learning process and the students' academic performance are also influenced by environmental factors such as noise, wall colors, room lights and open space [11].

The study and assessment of the factors, which may influence the learning of the students from the students' point of view, are also important for the teachers and administrators of the institution, as they may affect student performance and academic achievements and may influence the ranking of the institution nationally as well as internationally.

## Conclusion:

The external factors such as excellent teaching strategies, peaceful and comfortable environment, as well as the facility of library are of importance in the learning process according to the students' viewpoint.

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## Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

## Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

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## Conflict of interest

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## References

1. Sulemana M, Ngah I, Majid M. The Perspective of Students on Factors Affecting Their Academic Performance at the Tertiary Level. *Journal of Education, Society and Behavioural Science*. 2014; 4(8):1021-8.
2. Ali S, Haider Z, Munir F, Khan H, Ahmed A. Factors Contributing to the Students Academic Performance: A Case Study of Islamia University Sub-Campus. *Am J Educ Res*. 2013; 1(8):283-9.
3. Kang H, Chang B. Examining Culture's Impact on the Learning Behaviors of International Students from Confucius Culture Studying in Western Online Learning Context. *Journal of International Students*. 2016; 6(3):779-97.
4. Cordero JM, Gil-Izquierdo M. The effect of teaching strategies on student achievement: An analysis using TALIS-PISA-link. *J Policy Model*. 2018; 40(6):1313-31.
5. Negi PS, Negi V, Pandey AC. Impact of Information Technology on Learning, Teaching and Human Resource Management in Educational Sector. *International Journal of Computer Science and Telecommunications*. 2011; 2(4):66-72
6. Qaiser A, Zakaria M, Shaheen N, Iqbal F, Aziz A, Hashmi IQ. Medical Students Perception of Supportive Factors Regulating their Self-Regulated Learning. *Pakistan Journal of Medical & Health Sciences*. 2020;14(1): 86-8.
7. Urrutia-Aguilar ME, Fuentes-García RS, Vélez HG, Beck E, Arciniega MA, Guevara-Guzmán R. Impact of Teaching Strategies on Medical Student Academic Performance. *Glob J Health Sci*. 2018; 10(2):19-27.
8. Mustapha R, Bunian S, Rahman S, Husain MY, Bahtiar RA. Environmental Factors and Students' Learning Approaches: A Survey on Malaysian Polytechnics Students. *Journal of Education and Learning*. 2014; 8 (4):387-98.
9. Haverinen-Shaughnessy U, Shaughnessy RJ. Effects of Classroom Ventilation Rate and Temperature on Students' Test Scores. *PLoS ONE*. 2015; 10(8): e0136165.
10. Banleman K, Adjoa YF. An Analysis of the Correlation Between Academic Library Use and Student's Academic Performance: A Case Study of UDS -Wa Campus. *Information and Knowledge Management*. 2017;7(3):13-20
11. Gilavand A. Investigating the Impact of Environmental Factors on Learning and Academic Achievement of Elementary Students: Review. *International Journal of Medical Research & Health Sciences*. 2016;5(75):360-9

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